

**ecology and environment, inc.**

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International Specialists in the Environment

## M E M O R A N D U M

US EPA RECORDS CENTER REGION 5



465900

DATE: June 6, 1986  
TO: File  
FROM: Robert Hingtgen *R.H.*  
SUBJECT: Illinois/R05-8603-20/IL0431  
Chicago/103rd Street Transfer Station  
ILD020038089

The 103rd Street Transfer Station is located just south of 103rd street near Interstate 94. The area of this property is approximately 46 acres. The owner of the site is the City of Chicago and Waste Management of Illinois has operated the transfer facilities since 1980. Before this facility became a transfer station it was Calumet Incinerator, which operated from 1959 to 1979. During this time period domestic refuse was brought to the incinerator and burned or taken to a landfill. Incineration ceased in 1979 under direction of the City of Chicago as air quality standards were not met.

Since 1980 the facility has been operated as a transfer station only. Approximately 125 to 150 truck loads of household refuse are received each day. The waste is weighed and dumped in a concrete area inside the transfer station. Semi-trailer trucks then haul the waste to landfills. All waste accepted is transferred by the end of the day. Waste is not stored in the facility overnight, and the building is kept locked overnight. The handling of hazardous waste does not, and has not been known to occur here.

As there is no record of hazardous waste being handled or disposed at this facility, all route scores in the HRS model are zero since the total waste characteristics factors will be zero. Thus the site migration score is zero and an HRS scoring package will not be submitted for this site.

06V:5X

Facility name: 103rd St. Transfer Station

Location: 103rd Street and Doty Avenue

EPA Region: Region V

Person(s) in charge of the facility: Cliff Gould IEPA/DLPC  
(312) 345-9780

Name of Reviewer: Michael R Kullersh Date: \_\_\_\_\_

General description of the facility:  
 (For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

No record of any hazardous waste.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Potential  
 Scores:  $S_M = \frac{S_{SM}}{S_{SM}^{max}}$   $S_{GW} = \frac{S_{GW}}{S_{GW}^{max}}$   $S_{SW} = \frac{S_{SW}}{S_{SW}^{max}}$   $S_a = \frac{S_a}{S_a^{max}}$  ) 0  
 observed  
 $S_{FE} = -$   
 $S_{DC} = \frac{S_{DC}}{S_{DC}^{max}}$

FIGURE 1  
HRS COVER SHEET

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)
<b>1</b> Observed Release	<u>0</u> 45	1	<u>0</u>	45	3.1
If observed release is given a score of 45, proceed to line <b>4</b> . If observed release is given a score of 0, proceed to line <b>2</b> .					
<b>2</b> Route Characteristics					3.2
Depth to Aquifer of Concern	0 <u>1</u> <u>2</u> <u>3</u>	<u>2</u>	<u>6</u>	6	
Net Precipitation	0 <u>1</u> <u>2</u> <u>3</u>	<u>1</u>	<u>2</u>	3	
Permeability of the Unsaturated Zone	0 <u>1</u> <u>2</u> <u>3</u>	<u>1</u>	<u>3</u>	3	
Physical State	0 1 2 <u>3</u>	<u>1</u>	<u>3</u>	3	
Total Route Characteristics Score			<u>14</u>	15	
<b>3</b> Containment	<u>0</u> 1 2 3	1	<u>0</u>	3	3.3
<b>4</b> Waste Characteristics					3.4
Toxicity/Persistence	<u>0</u> 3 6 9 12 15 18	1		18	
Hazardous Waste Quantity	<u>0</u> 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score			<u>0</u>	26	
<b>5</b> Targets					3.5
Ground Water Use	0 1 <u>2</u> 3	3	<u>6</u>	9	
Distance to Nearest Well/Population Served	<u>0</u> 4 6 8 10 12 16 18 20 24 30 32 35 40	1	<u>0</u>	40	
Total Targets Score			<u>6</u>	49	
<b>6</b> If line <b>1</b> is 45, multiply <b>1</b> x <b>4</b> x <b>5</b> If line <b>1</b> is 0, multiply <b>2</b> x <b>3</b> x <b>4</b> x <b>5</b>			<u>0</u>	57,330	
<b>7</b> Divide line <b>6</b> by 57,330 and multiply by 100			S <sub>gw</sub> = <u>0</u>		

**FIGURE 2**  
**GROUND WATER ROUTE WORK SHEET**

6  
2  
3  
3

14

3

18

19

6

4788

8.35

Taking  
Soil Samples  
assuming  
Spills

Surface Water Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)	
0 [1] Observed Release	0 45	1	0	45	4.1	
If observed release is given a value of 45, proceed to line [4]. If observed release is given a value of 0, proceed to line [2].						
[2] Route Characteristics					4.2	
Facility Slope and Intervening Terrain	0 1 2 3	1	0	3		
1-yr. 24-hr. Rainfall	0 1 2 3	1	2	3		
Distance to Nearest Surface Water	0 1 2 3	2	4	6		
Physical State	0 1 2 3	1	3	3		
Total Route Characteristics Score			9	15		
[3] Containment	0 1 2 3	1	0	3	4.3	
[4] Waste Characteristics					4.4	
Toxicity/Persistence	0 3 6 9 12 15 18	1		18		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score			0	26		
[5] Targets					4.5	
Surface Water Use	0 1 2 3	3	6	9		
Distance to a Sensitive Environment	0 1 2 3	2	4	6		
Population Served/Distance to Water Intake Downstream	0 4 6 8 10 12 16 18 20 24 30 32 35 40	1	0	40		
Total Targets Score			10	55		
[6] If line [1] is 45, multiply [1] x [4] x [5] If line [1] is 0, multiply [2] x [3] x [4] x [5]			0	64,350		
[7] Divide line [6] by 64,350 and multiply by 100	S <sub>sw</sub> = 0					

**FIGURE 7  
SURFACE WATER ROUTE WORK SHEET**

Air Route Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
<b>1</b> Observed Release	<u>0</u> 45	1	<u>0</u>	45	5.1	
Date and Location:						
Sampling Protocol:						
If line <b>1</b> is 0, the $S_a = 0$ . Enter on line <b>5</b> . If line <b>1</b> is 45, then proceed to line <b>2</b> .						
<b>2</b> Waste Characteristics					5.2	
Reactivity and Incompatibility	0 1 2 3	1		3		
Toxicity	0 1 2 3	3		9		
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8		
Total Waste Characteristics Score				20		
<b>3</b> Targets					5.3	
Population Within 4-Mile Radius	{ 0 9 12 15 18 21 24 27 30	1		30		
Distance to Sensitive Environment	0 1 2 3	2		6		
Land Use	0 1 2 3	1		3		
Total Targets Score				39		
<b>4</b> Multiply <b>1</b> x <b>2</b> x <b>3</b>				35,100		
<b>5</b> Divide line <b>4</b> by 35,100 and multiply by 100				$S_a = \underline{0}$		

**FIGURE 9**  
**AIR ROUTE WORK SHEET**

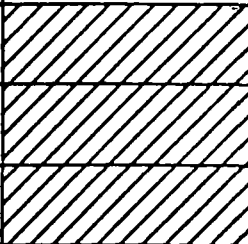
	s	s <sup>2</sup>
Groundwater Route Score (S <sub>gw</sub> )	0 <del>8.35</del>	0 <del>69.72</del>
Surface Water Route Score (S <sub>sw</sub> )	0 <del>7.55</del>	0 <del>57.00</del>
Air Route Score (S <sub>a</sub> )	0 <del>0</del>	0 <del>0</del>
$S_{gw}^2 + S_{sw}^2 + S_a^2$		0 <del>126.72</del>
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		0 <del>11.26</del>
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		0 <del>6.51</del>

FIGURE 10  
WORKSHEET FOR COMPUTING S<sub>M</sub>

Fire and Explosion Work Sheet						
Rating Factor	Assigned Value (Circle One)		Multi- plier	Score	Max. Score	Ref. (Section)
<b>1</b> Containment	1	3	1	—	3	7.1
<b>2</b> Waste Characteristics						7.2
Direct Evidence	0	3	1		3	
Ignitability	0	1 2 3	1		3	
Reactivity	0	1 2 3	1		3	
Incompatibility	0	1 2 3	1		3	
Hazardous Waste Quantity	0	1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score					20	
<b>3</b> Targets						7.3
Distance to Nearest Population	0	1 2 3 4 5	1		5	
Distance to Nearest Building	0	1 2 3	1		3	
Distance to Sensitive Environment	0	1 2 3	1		3	
Land Use	0	1 2 3	1		3	
Population Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0	1 2 3 4 5	1		5	
Total Targets Score					24	
<b>4</b> Multiply <b>1</b> x <b>2</b> x <b>3</b>					1,440	
<b>5</b> Divide line <b>4</b> by 1,440 and multiply by 100					SFE = ~	

**FIGURE 11**  
**FIRE AND EXPLOSION WORK SHEET**

Direct Contact Work Sheet						
Rating Factor	Assigned Value (Circle One)	Multi- plier	Score	Max. Score	Ref. (Section)	
<b>1</b> Observed Incident	<u>0</u> 45	1	<u>0</u>	45	8.1	
If line <b>1</b> is 45, proceed to line <b>4</b> If line <b>1</b> is 0, proceed to line <b>2</b>						
<b>2</b> Accessibility	<u>0</u> 1 2 3	1	<u>0</u>	3	8.2	
<b>3</b> Containment	<u>0</u> 15	1	<u>0</u>	15	8.3	
<b>4</b> Waste Characteristics Toxicity	<u>0</u> 1 2 3	5	<u>0</u>	15	8.4	
<b>5</b> Targets					8.5	
Population Within a 1-Mile Radius	0 1 2 3 4 <u>5</u>	<u>4</u>	<u>20</u>	20		
Distance to a Critical Habitat	0 <u>1</u> 2 3	<u>4</u>	<u>4</u>	12		
Total Targets Score			<u>24</u>	32		
<b>6</b> If line <b>1</b> is 45, multiply <b>1</b> x <b>4</b> x <b>5</b> If line <b>1</b> is 0, multiply <b>2</b> x <b>3</b> x <b>4</b> x <b>5</b>			<u>0</u>	21,600		
<b>7</b> Divide line <b>6</b> by 21,600 and multiply by 100			SDC = <u>0</u>			

**FIGURE 12**  
**DIRECT CONTACT WORK SHEET**